European Journal of Biochemistry

Volume 211 1993

Honorary Chairman Frederick Sanger, Cambridge

Editorial Board
August Böck (München)
Philipp Christen (Zürich) Chairman
Michael J. Clemens (London)
Hugo Fasold (Frankfurt)
Jean Girard (Paris)
Cornelis W. Hilbers (Nijmegen)
Eberhard Hofmann (Leipzig) Reviews Editor
Hans Jörnvall (Stockholm)
Claude Liébecq (Liège) Honorary Member
David G. Nicholls (Dundee)
Gösta Pettersson (Lund)
Johannes F.G. Vliegenthart (Utrecht)

Advisory Board
E. Appella (Bethesda)
P. Argos (Heidelberg)
R. Arnon (Rehovot)
F.X. Avilés (Barcelona)
S. Avrameas (Paris)
B.E.C. Banks (London)
A. Bax (Bethesda)
H. Betz (Frankfurt)
T.A. Bickle (Basel)
A. Billiau (Leuven)
M.D. Brand (Cambridge)
R.L.C. Brimacombe (Berlin)
M. Chabre (Valbonne)
K.J. Clemetson (Bern)
A.J. Cornish-Bowden (Marseille)
C. Crane-Robinson (Portsmouth)
R.R. Crichton (Louvain-la-Neuve)
M. Crompton (London)
B. Dobberstein (Heidelberg)
H. Durchschlag (Regensburg)
J. Duszynski (Warszawa)
T. Feizi (Harrow)
J. Filipski (Paris)
A. Finazzi-Agrò (Roma)
F. Franěk (Praha)
H. Frauenfelder (Urbana)
D. Gallwitz (Göttingen)
S. Ghisla (Konstanz)
F.M. Goñi (Bilbao)
L.A. Grivell (Amsterdam)
H. Grosjean (Gif-sur-Yvette)
F. Hucho (Berlin)
R.C. Hughes (London)
M. Jacob (Strasbourg)
K.H. Jakobs (Essen)
P. Jollès (Paris)
A. Kahn (Paris)
J.E. Kay (Brighton)
M. Klingenberg (München)
J.P. Klinmann (Berkeley)
W.N. Konings (Haren)
G. Kreil (Salzburg)
C.J. Leaver (Oxford)
L. Lehle (Regensburg)
J.-M. Lhoste (Orsay)
G.P. Mannaerts (Leuven)
W.J. Möller (Leiden)
Y. Nagai (Tokyo)
Y. Nishizuka (Kobe)
P.J. Parker (London)
D.J. Patel (New York)
L.A. Pinna (Padova)
T.A. Rapoport (Berlin)
L. Rask (Uppsala)
J. Rétey (Karlsruhe)
P.R. Rich (Bodmin)
J.F. Riordan (Boston)
H. Rüterjans (Frankfurt)
P.R. Schimmel (Cambridge)
M.C. Scrutton (London)
V.P. Skulachev (Moscow)
K. Soda (Kyoto)
D.G. Söll (New Haven)
J.M. Tager (Bari)
R.K. Thauer (Marburg)
R. Timpl (Martinsried)
I.P. Trayer (Birmingham)
V. Ullrich (Konstanz)
J. Vandekerckhove (Gent)
C. Veeger (Wageningen)
P. Venetianer (Szeged)
A. Verbert (Villeneuve-d'Ascq)
S.G. Wilkinson (Hull)
R.J.P. Williams (Oxford)
K.W.A. Wirtz (Utrecht)

Editorial Office J. Maillou, L. Rowett, B. Whyte, S.A. Brooks, N. Bulgheroni, J. Piket Stähelin, M.E. Vetterli
Apollostrasse 2, Postfach, CH-8032 Zürich, Switzerland

Production Office S. Förster, G. Schanno, B. Gärtner
Tiergartenstrasse 17, Postfach 105280, W-6900 Heidelberg, Germany

**Published by Springer International
on behalf of the
Federation of European Biochemical Societies**

The exclusive copyright for all languages and countries, including the rights for photographic reproduction, electronic data base, video disks, or any other reproduction of text, figures, or tables from this journal, also in microform, is vested in the Federation of European Biochemical Societies.

The use of general descriptive names, trade names, trade marks, etc., in this publication, even if the former are not specifically identified, is not to be interpreted that such names are exempt from the relevant protective laws and regulations and may accordingly be used freely by anyone.

Individuals may reproduce material published in this journal when writing a review or book as long as they make proper acknowledgement to the origin of the material and obtain the author(s)' permission if this condition applies.

Springer Verlag Berlin Heidelberg New York

Printers: Wiesbadener Graphische Betriebe GmbH, Wiesbaden

Printed in Germany

Copyright © by the Federation of European Biochemical Societies 1993.

Volume 211 1993

Table of contents

No. 1/2 1–380 issued on January 15, 1993
No. 3 381–918 issued on February 1, 1993

Corrections 909

Information for authors 911–917

Contents of Volume 211 I–X

Reviews

The structure of DNA junctions and their interaction with enzymes
D. R. Duckett, A. I. H. Murchie, A. Bhattacharyya, R. M. Clegg, S. Diekmann, E. von Kitzing and D. M. J. Lilley
This article was published, in error, as a regular article in 207, 285–295.

From anemia to cerebellar dysfunction – A review of the ankyrin gene family
S. Lambert and V. Bennett 1–6

The Ets family of transcription factors
B. Wasylyk, S. L. Hahn and A. Giovane 7–18

Advances in metallo-procarboxypeptidases – Emerging details on the inhibition mechanism and on the activation process
F. X. Avilés, J. Vendrell, A. Guasch, M. Coll and R. Huber 381–389

Priority Papers

Homology of pyridoxal-5′-phosphate-dependent aminotransferases with the *cobC* (cobalamin synthesis), *nifS* (nitrogen fixation), *pabC* (*p*-aminobenzoate synthesis) and *malY* (abolishing endogenous induction of the maltose system) gene products
P. K. Mehta and P. Christen 373–376

Chemical assay for cyst(e)ine-rich peptides detects a novel intestinal peptide ZF-1, homologous to a single zinc-finger motif
R. Sillard, H. Jörnvall, M. Carlquist and V. Mutt 377–380

Nucleic acids, protein synthesis and molecular genetics

Synthesis and assembly of functionally active human vascular endothelial growth factor homodimers in insect cells
B. L. Fiebich, B. Jäger, C. Schöllmann, K. Weindel, J. Wilting, G. Kochs, D. Marmé, H. Hug and H. A. Weich 19–26

High-yield production of bacteriorhodopsin via expression of a synthetic gene in *Escherichia coli*
M. Pompejus, K. Friedrich, M. Teufel and H.-J. Fritz 27–35

Partial cloning of a squid microtubule-associated protein (MAP H1) and the identification of the microtubule binding domain
N. G. Kronidou and R. D. Sloboda 193–204

DNA excision-repair synthesis is enhanced in a murine leukemia L1210 cell line resistant to cisplatin
P. Calsou, J.-M. Barret, S. Cros and B. Salles 403–409

Structure of the promoter region of the gene encoding cytochrome *c* oxidase subunit V in *Dictyostelium*
R. Rizzuto, D. Sandon, M. Brini, R. Marschalek, T. Dingermann and R. Bisson 411–414

Osteogenesis imperfecta and type-I collagen mutations – A lethal variant caused by a Gly910 → Ala substitution in the α1(I) chain
M. Valli, A. Sangalli, A. Rossi, M. Mottes, A. Forlino, R. Tenni, P. F. Pignatti and G. Cetta 415–419

Interaction of Hoechst 33258 with the minor groove of the A+T-rich DNA duplex d(GGTAATTACC)$_2$ studied in solution by NMR spectroscopy
K. J. Embrey, M. S. Searle and D. J. Craik 437–447

Hydroperoxide metabolism in rat liver – K^+ channel activation, cell volume changes and eicosanoid formation
C. Hallbrucker, M. Ritter, F. Lang, W. Gerok and D. Häussinger 449–458

Characterization of the nuclear proteins binding the CACCC element of a glucocorticoid-responsive enhancer in the tyrosine aminotransferase gene
C. DeVack, B. Lupp, M. Nichols, E. Kowenz-Leutz, W. Schmid and G. Schütz 459–465

Localization and functional analysis of DNase-I-hypersensitive sites in the human *c-sis/PDGF-B* gene transcription unit and its flanking regions
R. P. H. Dirks, H. J. Jansen, J. Gerritsma, C. Onnekink and H. P. J. Bloemers 509–519

Use of gene fusions of the structural gene *sdaA* to purify L-serine deaminase 1 from *Escherichia coli* K-12
H. Su, J. Moniakis and E. B. Newman 521–527

Purification and characterisation of an initiation-factor-2 kinase from uninduced mouse erythroleukaemia cells
H. Mellor, N. T. Price, S. Oldfield, T. F. Sarre and C. G. Proud 529–538

Immunochemical characterisation of a dehydroepiandrosterone sulfotransferase in rats and humans
S. Sharp, E. V. Barker, M. W. H. Coughtrie, P. R. Lowenstein and R. Hume 539–548

Cloning, sequencing and expression of the gene encoding glucose dehydrogenase from the thermophilic archaeon *Thermoplasma acidophilum*
J. R. Bright, D. Byrom, M. J. Danson, D. W. Hough and P. Towner 549–554

Cloning, sequencing and expression of the gene encoding the carboxytransferase subunit of the biotin-dependent Na^+ pump glutaconyl-CoA decarboxylase from *Acidaminococcus fermentans* in *Escherichia coli*
K. Bendrat and W. Buckel 697–702

Isolation and characterization of the rat gene encoding glutamate dehydrogenase
A. T. Das, A. C. Arnberg, H. Malingré, P. Moerer, R. Charles, A. F. M. Moorman and W. H. Lamers 795–803

Site-directed mutagenesis and chemical modification of histidine residues on an α-class chick liver glutathione *S*-transferase CL 3-3 – Histidines are not needed for the activity of the enzyme and diethylpyrocarbonate modifies both histidine and lysine residues
L.-H. Chang and M. F. Tam 805–811

Protein chemistry and structure

Flavin dynamics in reduced flavodoxins – A time-resolved polarized fluorescence study
R. Leenders, M. Kooijman, A. van Hoek, C. Veeger and A. J. W. G. Visser 37–45

Comparison of the dynamic structure of α-chymotrypsin in aqueous solution and in reversed micelles by fluorescent active-site probing
V. N. Dorovska-Taran, C. Veeger and A. J. W. G. Visser 47–55

Snake-venom phospholipase A_2 neurotoxins – Potentiation of a single-chain neurotoxin by the chaperon subunit of a two-component neurotoxin
V. Choumet, B. Saliou, L. Fideler, Y.-C. Chen, F. Gubensek, C. Bon and E. Delot 57–62

NMR solution structure of the [Ala^{26}]parathyroid-hormone-related protein (1–34) expressed in humoral hypercalcemia of malignancy
F. R. Ray, J. A. Barden and B. E. Kemp 205–211

Protein flexibility and aggregation state of human epidermal growth factor – A time-resolved fluorescence study of the native protein and engineered single-tryptophan mutants
J. Gallay, M. Vincent, I. M. Li de la Sierra, J. Alvarez, R. Ubieta, J. Madrazo and G. Padron 213–219

NADH binding site and catalysis of NADH peroxidase
T. Stehle, A. Claiborne and G. E. Schulz 221–226

High-resolution epitope mapping and fine antigenic characterization of the main immunogenic region of the acetylcholine receptor – Improving the binding activity of synthetic analogues of the region
I. Papadouli, C. Sakarellos and S. J. Tzartos 227–234

A two-dimensional NMR study of Co(II)$_7$ rabbit liver metallothionein
I. Bertini, C. Luchinat, L. Messori and M. Vasak 235–240

Differential insertion of insulin receptor complexes into Triton X-114 bilayer membranes – Evidence for a differential accessibility of the membrane-exposed receptor domain
R.-R. Flörke, H. W. Klein and H. Reinauer 241–247

Human and rodent Alzheimer β-amyloid peptides acquire distinct conformations in membrane-mimicking solvents
L. Otvos Jr, G. I. Szendrei, V. M.-Y. Lee and H. H. Mantsch 249–257

The cooperative binding of phenylalanine to phenylalanine 4-monooxygenase studied by ^{1}H-NMR paramagnetic relaxation – Changes in water accessibility to the iron at the active site upon substrate binding
A. Martínez, S. Olafsdottir and T. Flatmark 259–266

Mutations that significantly change the stability, flexibility and quaternary structure of the l-lactate dehydrogenase from *Bacillus megaterium*
M. Kotik and H. Zuber 267–280

Purification, complete amino acid sequence and structural characterization of the heat-stable sweet protein, mabinlin II
X. Liu, S. Maeda, Z. Hu, T. Aiuchi, K. Nakaya and Y. Kurihara 281–287

Complete amino acid sequence of the regulatory light chain of obliquely striated muscle myosin from earthworm, *Lumbricus terrestris*
M. Serwe, H. E. Meyer, A. G. Craig, D. Carlhoff and J. D'Haese 341–346

Structural characterization of a biologically active human lipocortin 1 expressed in *Escherichia coli*
R. Arcone, G. Arpaia, M. Ruoppolo, A. Malorni, P. Pucci, G. Marino, A. Ialenti, M. Di Rosa and G. Ciliberto 347–355

Evidence of serine-protease activity closely associated with *Drosophila* alcohol dehydrogenase
J. Fibla, S. Atrian and R. González-Duarte 357–365

The amino acid sequence of glutahione transferase from *Proteus mirabilis*, a prototype of a new class of enzymes
G. Mignogna, N. Allocati, A. Aceto, R. Piccolomini, C. Di Ilio, D. Barra and F. Martini 421–425

On the mechanism of energy transfer to Tb^{3+} ions in proteins – A time-resolved luminescence study of the Tb-elastase complex
J.-L. Martini, C. Tetreau, F. Pochon, H. Tourbez, J.-M. Lentz and D. Lavalette 467–473

^{1}H- and ^{13}C-NMR investigation of redox-state-dependent and temperature-dependent conformation changes in horse cytochrome *c*
D. L. Turner and R. J. P. Williams 555–562

Evaluation of ^{13}C and ^{1}H Fermi contact shifts in horse cytochrome *c* – The origin of the anti-Curie effect
D. L. Turner 563–568

CD and ^{1}H-NMR studies on the conformational properties of peptide fragments from the C-terminal domain of thermolysin
M. A. Jimenez, M. Bruix, C. Gonzalez, F. J. Blanco, J. L. Nieto, J. Herranz and M. Rico 569–581

Interleukin-1β-specific partial agonists defined by site-directed mutagenesis studies
F. Guinet, J.-D. Guitton, N. Gault, F. Folliard, N. Touchet, J.-M. Cherel, A. Crespo, A. Destourbe, P. Bertrand, P. Denefle, J.-F. Mayaux, A. Bousseau, M. Duchesne, B. Terlain and T. Cartwright 583–590

Structure/function relationships in the pyruvate dehydrogenase complex from *Azotobacter vinelandii* – Role of the linker region between the binding and catalytic domain of the dihydrolipoyl transacetylase component
E. Schulze, A. H. Westphal, R. Hanemaaijer and A. de Kok 591–599

Isolation and molecular characterization of a hyperglycemic neuropeptide from the sinus gland of the terrestrial isopod *Armadillidium vulgare* (Crustacea)
G. Martin, O. Sorokine and A. Van Dorsselaer 601–607

Purification, characterization, crystallisation and X-ray analysis of selenomethionine-labelled hydroxymethylbilane synthase from *Escherichia coli*
A. Hädener, P. K. Matzinger, V. N. Malashkevich, G. V. Louie, S. P. Wood, P. Oliver, P. R. Alefounder, A. R. Pitt, C. Abell and A. R. Battersby 615–624

Interaction of the colicin-A pore-forming domain with negatively charged phospholipids
J. M. González-Mañas, J. H. Lakey and F. Pattus 625–633

Overexpression of trypanosomal triosephosphate isomerase in *Escherichia coli* and characterisation of a dimer-interface mutant
T. V. Borchert, K. Pratt, J. P. Zeelen, M. Callens, M. E. M. Noble, F. R. Opperdoes, P. A. M. Michels and R. K. Wierenga 703–710

Biochemical, immunological and ultrastructural characterization of aggregation substances encoded by *Enterococcus faecalis* sex-pheromone plasmids
H. Hirt, G. Wanner, D. Galli and R. Wirth 711–716

Specificity of the binding domain of glucoamylase 1
N. J. Belshaw and G. Williamson 717–724

Characterization of cardiac fatty-acid-binding protein from human placenta – Comparison with placenta hepatic types
T. Das, G. Sa and M. Mukherjea 725–730

Localization of the tightly bound divalent-cation-dependent and nucleotide-dependent conformation changes in G-actin using limited proteolytic digestion
H. Strzelecka-Gołaszewska, J. Moraczewska, S. Y. Khaitlina and M. Mossakowska 731–742

Localisation of a receptor-recognition domain on the S3 subunit of pertussis toxin by peptide mapping
A. Tallett, R. N. Seabrook, L. I. Irons, A. Robinson, S. Van Heyningen and T. Atkinson 743–748

Involvement of the Arg179 in the active site of human IL-6
V. Fontaine, R. Savino, R. Arcone, L. De Wit, J. P. J. Brakenhoff, J. Content and G. Ciliberto 749–755

Sequence-specific ^{1}H-NMR assignment and secondary structure of black mamba dendrotoxin I, a highly selective blocker of voltage-gated potassium channels
M.-F. Foray, J.-M. Lancelin, M. Hollecker and D. Marion 813–820

The primary structure of turtle Cu,Zn superoxide dismutase – Structural and functional irrelevance of an insert conferring proteolytic susceptibility
M. E. Schinina, F. Bossa, A. Lania, C. R. Capo, P. Carlini and L. Calabrese 843–849

Molecular cloning and nucleotide sequence of the gene for pyruvate kinase of *Bacillus stearothermophilus* and the production of the enzyme in *Escherichia coli* – Evidence that the genes for phosphofructokinase and pyruvate kinase constitute an operon
H. Sakai and T. Ohta 851–859

Enzymology

Engineered yeast cells as model to study coupling between human xenobiotic metabolizing enzymes – Simulation of the two first steps of benzo[a]pyrene activation
J.-C. Gautier, P. Urban, P. Beaune and D. Pompon 63–72

Enzyme inactivation and protection during entrapment in reversed micelles
Y. L. Khmelnitsky, R. Hilhorst, A. J. W. G. Visser and C. Veeger 73–77

Rat kidney endopeptidase 24.16 – Purification, physico-chemical characteristics and differential specificity towards opiates, tachykinins and neurotensin-related peptides
H. Barelli, J.-P. Vincent and F. Checler 79–90

Interaction of staphylokinase with different molecular forms of plasminogen
H. R. Lijnen, B. Van Hoef and D. Collen 91–97

Epitope mapping and immunoinactivation of human gastric lipase using five monoclonal antibodies
M. Aoubala, C. Daniel, A. De Caro, M. G. Ivanova, M. Hirn, L. Sarda and R. Verger 99–104

Purification and characterization of an aminopeptidase A from *Staphylococcus chromogenes* and its use for the synthesis of amino-acid derivatives and dipeptides
I. Yoshpe-Besançon, D. Auriol, F. Paul, P. Monsan, J.-C. Gripon and B. Ribadeau-Dumas 105–110

Specificity of T-cell protein tyrosine phosphatase toward phosphorylated synthetic peptides
M. Ruzzene, A. Donella-Deana, O. Marin, J. W. Perich, P. Ruzza, G. Borin, A. Calderan and L. A. Pinna 289–295

Characterization and kinetic properties of a soya-bean cell-wall phosphatase
N. Ferté, A.-M. Moustacas, J. Nari, M. Teissere, M. Borel, I. Thiebart and G. Noat 297–304

Ribonucleases from the extreme thermophilic archaebacterium *S. solfataricus*
P. Fusi, G. Tedeschi, A. Aliverti, S. Ronchi, P. Tortora and A. Guerritore 305–310

Three-dimensional structure of the ternary complex between ribonuclease T1, guanosine 3′,5′-bisphosphate and inorganic phosphate at 0.19 nm resolution
A. Lenz, H.-W. Choe, J. Granzin, U. Heinemann and W. Saenger 311–316

Lignin peroxidase L3 from *Phlebia radiata* – Pre-steady-state and steady-state studies with veratryl alcohol and a non-phenolic lignin model compound 1-(3,4-dimethoxyphenyl)-2-(2-methoxyphenoxy)propane-1,3-diol
T. Lundell, R. Wever, R. Floris, P. Harvey, A. Hatakka, G. Brunow and H. Schoemaker 391–402

Mutant aspartate aminotransferase (K258H) without pyridoxal-5′-phosphate-binding lysine residue – Structural and catalytic properties
M. Ziak, J. Jäger, V. N. Malashkevich, H. Gehring, R. Jaussi, J. N. Jansonius and P. Christen 475–484

Dephosphorylation of phosphorylated atrial natriuretic peptide by protein phosphatase 2A
F. M. Dautzenberg, D. Müller and D. Richter 485–490

Reduction and mobilization of iron by a NAD(P)H:flavin oxidoreductase from *Escherichia coli*
J. Coves and M. Fontecave 635–641

Comparison of stability properties of lactate dehydrogenase B4/ε-crystallin from different species
C. E. M. Voorter, L. T. M. Wintjes, P. W. H. Heinstra, H. Bloemendal and W. W. De Jong 643–648

Products of enzymatic reduction of benzoyl-CoA, a key reaction in anaerobic aromatic metabolism
J. Koch, W. Eisenreich, A. Bacher and G. Fuchs 649–661

Kinetics and mechanism of an NADPH-dependent succinic semialdehyde reductase from bovine brain
S. W. Cho, M.-S. Song, G.-Y. Kim, W.-D. Kang, E. Y. Choi and S. Y. Choi 757–762

Purification, characterization and HPLC assay of *Salmonella* glucose-1-phosphate thymidylyltransferase from the cloned *rfbA* gene
L. Lindquist, R. Kaiser, P. R. Reeves and A. A. Lindberg 763–770

Importance of the conserved active-site residues Tyr7, Glu106 and Thr199 for the catalytic function of human carbonic anhydrase II
Z. Liang, Y. Xue, G. Behravan, B.-H. Jonsson and S. Lindskog 821–827

Affinity labelling of sorbitol dehydrogenase from sheep liver with α-bromo-β-(5-imidazolyl)propionic acid
H. Reiersen, K. Sletten and J. S. McKinley-McKee 861–869

Effect of mutation of an amino acid residue near the catalytic site on the activity of *Bacillus stearothermophilus* α-amylase
K. Takase 899–902

Carbohydrates, lipids and other natural products

Effect of side-chain structure on inhibition of yeast fatty-acid synthase by cerulenin analogues
N. Morisaki, H. Funabashi, R. Shimazawa, J. Furukawa, A. Kawaguchi, S. Okuda and S. Iwasaki 111–115

Isolation and characterization of an endogenous Na^+,K^+-ATPase-specific inhibitor from pig urine
M. Tamura, T. M. Harris, F. Konishi and T. Inagami 317–327

Isolation and structural characterization of novel sialylated oligosaccharide-alditols from respiratory-mucus glycoproteins of a patient suffering from bronchiectasis
A. Klein, C. Carnoy, G. Lamblin, P. Roussel, J. A. van Kuik and J. F. G. Vliegenthart 491–500

Differentially expressed patterns of glycosaminoglycan structure in heparan sulfate proteoglycans and free chains
P. Hovingh, M. Piepkorn and A. Linker 771–779

Role of sugar chains in the *in-vitro* activity of recombinant human interleukin 5
S. Kodama, M. Tsujimoto, N. Tsuruoka, T. Sugo, T. Endo and A. Kobata 903–908

Membranes and bioenergetics

The reaction mechanism of Ca^{2+}-ATPase of sarcoplasmic reticulum – Direct measurement of the Mg · ATP dissociation constant gives similar values in the presence or absence of calcium
J.-J. Lacapere and F. Guillain 117–126

Inhibition of proton-translocating transhydrogenase from photosynthetic bacteria by *N,N'*-dicyclohexylcarbodiimide
T. Palmer, R. Williams, N. P. J. Cotton, C. M. Thomas and J. B. Jackson 663–669

The role of inositol phospholipids in the association of band 4.1 with the human erythrocyte membrane
P. Gascard, T. Pawelczyk, J. M. Lowenstein and C. M. Cohen 671–681

Unidirectional arginine transport in reconstituted plasma-membrane vesicles from yeast overexpressing *CAN1*
M. Opekarova, T. Caspari and W. Tanner 683–688

Interaction of myelin basic protein with artificial membranes – Parameters governing binding, aggregation and dissociation
M. B. A. ter Beest and D. Hoekstra 689–696

Kinetics of biliary secretion of chylomicron remnant cholesterol (esters) in the rat
M. C. M. van Dijk, M. Pieters and T. J. C. van Berkel 781–787

Molecular cell biology and metabolism

Action spectrum of light-harvesting-II precursor apoprotein transcript accumulation and coordinated translation
K. A. Triantaphyllopoulos and J. H. Argyroudi-Akoyunoglou 127–134

Transcriptional induction of β-galactoside α-2,6-sialyltransferase in rat fibroblast by dexamethasone
V. Vandamme, A. Pierce, A. Verbert and P. Delannoy 135–140

Doxorubicin-induced lipid peroxidation and glutathione peroxidase activity in tumor cell lines selected for resistance to doxorubicin
M. N. Benchekroun, P. Pourquier, B. Schott and J. Robert 141–146

A purification method and *N*-glycosylation sites of a 36-cysteine-containing, putative cell/cell adhesion glycoprotein gp64 of the cellular slime mold, *Polysphondylium pallidum*
T. Saito, T. Kumazaki and H. Ochiai 147–155

The immediate activator of the NADPH oxidase is arachidonate not phosphorylation
L. M. Henderson, S. K. Moule and J. B. Chappell 157–162

Characterization of prostaglandin-$F_{2\alpha}$-binding sites on rat hepatocyte plasma membranes
F. Neuschäfer-Rube, G. P. Püschel and K. Jungermann 163–169

Purification and characterization of ribonucleoproteins from pea chloroplasts
C. C. Subbaiah and K. K. Tewari 171–179

The use of *lac*-type promoters in control analysis
P. R. Jensen, H. V. Westerhoff and O. Michelsen 181–191

cDNA cloning, structural features, and eucaryotic expression of human TAG-1/axonin-1
T. H. Hasler, C. Rader, E. T. Stoeckli, R. A. Zuellig and P. Sonderegger 329–339

Fast myosin heavy chain diversity in skeletal muscles of the rabbit : heavy chain IId, not IIb predominates
S. Aigner, B. Gohlsch, N. Hämäläinen, R. S. Staron, A. Uber, U. Wehrle and D. Pette 367–372

Eclosion hormone activates phosphatidylinositol hydrolysis in silkworm abdominal ganglia during adult metamorphosis
Y. Shibanaka, H. Hayashi, M. Takai and N. Fujita 427–430

Changes in the insulin-sensitive glycosylphosphatidyl-inositol signalling system with aging in rat hepatocytes
J. A. Sánchez-Arias, J. C. Sánchez-Gutiérrez, A. Guadaño, J. F. Alvarez, B. Samper, J. M. Mato and J. E. Felíu 431–436

Expression of the γ-subunit gene of desulfoviridin-type dissimilatory sulfite reductase and of the α- and β-subunit genes is not coordinately regulated
R. A. R. Karkhoff-Schweizer, M. Bruschi and G. Voordouw 501–507

Neurotrophin-3 receptors in the developing chicken retina
A. Rodriguez-Tebar, E. J. de la Rosa and A. Arribas 789–794

Cholesterol metabolism in rat adrenal gland during reversible endotoxic shock
S. Abarca and R. Garcia 829–834

Cellular retinoic-acid-binding-protein and retinol-binding-protein in the cells of the rat seminiferous tubules and their regulation by retinoids
R. Faraonio, M. Galdieri and V. Colantuoni 835–842

Identification of a distinct human high-density lipoprotein subspecies defined by a lipoprotein-associated protein, K-45 – Identity of K-45 with paraoxonase
M.-C. Blatter, R. W. James, S. Messmer, F. Barja and D. Pometta 871–879

Prechaperonin 60 and preornithine transcarbamylase share components of the import apparatus but have distinct maturation pathways in rat liver mitochondria
D. Peralta, T. Lithgow, N. J. Hoogenraad and P. B. Høj 881–889

Developmental and hormonal regulation of the *Xenopus* liver-type arginase gene
Q. Xu, B. S. Baker and J. R. Tata 891–898

Indexed in *Current Contents*